

justment the up and down variation could easily be followed. It proved a great satisfaction to examine water fleas, mosquito larvae, etc., when fenced in. The holes were arranged 6 in a circle of $1\frac{1}{2}$ in. diameter and the seventh in the center. Their diameter was determined by measuring the diameter of the field with a stage micrometer and then selecting the next smaller size of twist drill by which to do the drilling. To guard against the smallest animalculæ creeping between the brass and the watch glass the bottom face could be covered with a thin film of balsam, air dried until quite of proper consistency, and then a cover glass pressed into intimate contact, so that no balsam would run into the spaces.

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BOG SOLUTIONS AND PLANTS

Dachnowski (Bot. Gaz. Dec. 1912) writes on the physiological effects of peat or bog solutions on the plants subjected to them. It has been clearly established that the nature of these organic solutions and of the bacterial flora maintaining life therein is a very important factor in limiting the higher life of these regions. The fact that some plants tolerate these conditions and others do not makes clear a difference in the plants themselves. The writer is endeavoring to see what it is that makes this difference in plants exposed to the solutions. The responsibility must rest either upon difference in diosmotic qualities of the plasmic membranes, or upon differences in cytoplasmic resistance, or on both. He finds the following facts which help to localize the solution of the problem: (1) Some plants may cause the precipitation of the hurtful materials in the solutions in an insoluble form, by enzymic action. This conceivably may take place outside the membrane, inside the cell; or in the membrane itself, affecting its permeability; (2) other plants may possess the power of assimilating with impunity these organic substances.

It is well known that these solutions have little effect on certain xerophytic plants, while they totally inhibit agricultural plants. The value of the work is evident as bearing on the agricultural use of peat lands, on the nature of xeromorphy itself, as well as on the successions of vegetation in the bogs.